

Amendments to the claims

Listing of Claims, as follows:

1. (Currently Amended) A system ~~for controlling access to an application program in a wireless device~~, comprising:
 - a memory device including a distributed application directory, the directory listing at least all applications resident in the wireless device; and
 - a processor disposed in communication with the memory device for controlling access to an application program in the device, the processor configured to:
 - exchange distributed application directory information with a nearby wireless device over a wireless ad-hoc communications network for providing a combined distributed application directory listing;
 - choose a selected application from a list of application programs in the combined distributed applications directory;
 - assign a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;
 - examine at least one control parameter from the group comprising application states; user-defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with the selected prioritized application; and
 - determine a behavior for the selected application based on the assigned priority and the at least one control parameter.

2. (Previously Presented) The system of claim 1, wherein said at least one control parameter dictates a behavior of the selected prioritized application.

3. (Previously Presented) The system of claim 7, wherein the behavior includes allowing communication with the selected prioritized application, refusing communication

with the selected prioritized application, downloading the selected prioritized application, or distributing the selected prioritized application.

4. (Previously Presented) The system of claim 7, wherein when a matching application is resident on the nearby wireless device, the processor is further configured to:

- send a connection request to the nearby wireless device;
- receive an accept connections message from the nearby wireless device;
- launch the selected prioritized application; and
- send a service request to connect the prioritized and the matching application.

5. (Previously Presented)) The system of claim 4, wherein when a user closes the selected prioritized application, the processor is further configured to:

- erase the selected prioritized application, if specified by the associated control parameters.

6. (Previously Presented) The system of claim 2, wherein to choose the selected prioritized application, the processor is further configured to:

- retrieve an entry from the distributed application directory stored in a middleware layer portion of the memory device, the entry associating the selected prioritized application and the nearby device and including said at least one control parameter.

7. (Currently Amended) A system ~~for controlling access to an application program in a wireless device connected to an ad-hoc communications network~~, comprising:

- a memory device including a distributed application directory in a middleware layer, the directory listing all applications resident in each device in an ad-hoc network; and
- a processor disposed in communication with the memory device for controlling access to an application program in the device, the processor configured to:
 - send an inquiry message to the ad-hoc communications network;
 - receive a response to the inquiry message from a nearby wireless device;
 - choose a selected application from a list of prioritized application programs in the

distributed applications directory by retrieving an entry from the distributed application directory stored in the middleware layer portion of the memory device, the entry associating the selected prioritized application and the nearby device and including said at least one control parameter; and

examine at least one control parameter from the group comprising application states; user-defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications associated with the selected prioritized application, wherein said at least one control parameter dictates a behavior of the selected prioritized application;

wherein the choice of the selected application is based on a priority assigned to the entry, wherein the priority is calculated from a local application priority and the corresponding application priority to the nearby device.

8. (Currently Amended) A method ~~for controlling access to an application program in a wireless device~~, comprising:

exchanging distributed application directory information with a nearby wireless device over a wireless ad-hoc communications network for providing a combined distributed application directory listing;

choosing a selected application from a list of application programs in the combined distributed applications directory, the directory listing all applications resident in each device in the ad-hoc network;

assigning a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;

examining at least one control parameter from the group comprising application states; user-defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with the selected application for controlling access to the selected application ; and

determining a behavior for the selected application based on the assigned priority

and the at least one control parameter.

9. (Original) The method of claim 8, wherein said at least one control parameter dictates a behavior of the selected application.

10. (Previously Presented) The method of claim 14, wherein the behavior includes allowing communication with the selected application, refusing communication with the selected application, downloading the selected application, or distributing the selected application.

11. (Previously Presented) The method of claim 14, wherein when a matching application is resident on the nearby wireless device, the method further comprises:
 sending a connection request to the nearby wireless device;
 receiving an accept connections message from the nearby wireless device;
 launching the selected application; and
 sending a service request to connect the selected application and the matching application.

12. (Previously Presented) The method of claim 11, wherein when a user closes the selected application, the method further comprises:
 erasing the selected application, if specified by the associated control parameters.

13. (Previously Presented) The method of claim 9, wherein the choosing of the selected application further comprises:
 retrieving an entry from the distributed application directory stored in a middleware layer portion of a memory device, the entry associating the selected application and the nearby device and including said at least one control parameter.

14. (Currently Amended) A method for controlling access to an application program in a wireless device connected to an ad hoc communications network, comprising:

sending an inquiry message to the ad-hoc communications network;
receiving a response to the inquiry message from a nearby wireless device;
choosing a selected application from a list of prioritized application programs in a distributed applications directory, the directory listing all applications resident in each device in an ad-hoc network;

examining at least one control parameter associated from the group comprising application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications with the selected application for controlling access to the selected application, wherein said at least one control parameter dictates a behavior of the selected application; and

retrieving an entry from the distributed application directory stored in the middleware layer portion of a memory device, the entry associating the selected application and the nearby device and including said at least one control parameter;

wherein the choice of the selected application is based on a priority assigned to the entry, wherein the priority is calculated from a local application priority and the corresponding application priority to the nearby device.

15. (Currently Amended) A computer readable medium encoded with computer executable instructions ~~program product for controlling access to an application program in a wireless device~~, comprising:

a computer readable medium storing:

program code for exchanging distributed application directory information with a nearby wireless device over a wireless ad-hoc communications network for providing a combined distributed application directory listing;

program code for choosing a selected application from a list of application programs in the combined distributed applications directory;

program code for assigning a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;

program code for examining at least one control parameter from the group comprising application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with the selected application for controlling access to the selected prioritized application ;
and

program code for determining a behavior for the selected application based on the assigned priority and the at least one control parameter.

16. (Currently Amended) The computer readable medium ~~program-product~~ of claim 15, the computer readable medium further storing:

program code for sending a connection request to the nearby wireless device when a matching application is resident on the nearby wireless device;

program code for receiving an accept connections message from the nearby wireless device when a matching application is resident on the nearby wireless device;

program code for launching the selected application when a matching application is resident on the nearby wireless device; and

program code for sending a service request to connect the selected application and the matching application when a matching application is resident on the nearby wireless device.

17. (Currently Amended) The computer readable medium ~~program-product~~ claim 16, the computer readable medium further storing:

program code for erasing the selected application when a user closes the selected application, if specified by the associated control parameters.

18. (Currently Amended) The computer readable medium ~~program-product~~ of claim 15, wherein the program code for choosing of the selected application further comprises:

program code for retrieving an entry from an application directory stored in a middleware layer portion of the memory device, the entry associating the selected

application and the nearby device and including said at least one control parameter.

19. (Currently Amended) A system ~~for controlling access to an application program in a wireless device~~, comprising:

a memory device including a distributed applications directory; and

a processor disposed in communication with the memory device for controlling access to a selected prioritized application in the device, the processor configured to:

receive a service request from a nearby wireless device over a wireless ad-hoc communications network to connect to an application;

exchange distributed application directory information with the nearby wireless device for providing a combined distributed application directory listing;

assign a priority for the requested application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;

examine at least one control parameter from the group comprising application states; user-defined application settings and macros, wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with a matching application program in the nearby device for connection to the requested prioritized application; and

determine a behavior for the requested application based on the assigned priority and the at least one control parameter.

20. (Previously Presented) The system of claim 19, wherein said at least one control parameter dictates a behavior of the matching application.

21. (Previously Presented) The system of claim 20, wherein the behavior includes allowing communication with the selected prioritized application, refusing communication with the selected prioritized application, downloading the selected prioritized application, or

distributing the selected prioritized application.

22. (Previously Presented) The system of claim 20, wherein the processor is further configured to:

launch the selected prioritized application; and

receive a service request to connect the selected prioritized application and the matching application.

23. (Previously Presented) The system of claim 22, wherein when a user closes the matching application, the processor is further configured to:

erase the selected prioritized application, if specified by the associated control parameters.

24. (Currently Amended) A method ~~for controlling access to an application program in a wireless device~~, comprising:

receiving a service request from a nearby wireless device over a wireless ad-hoc communications network to connect to an application

exchanging distributed application directory information with the nearby wireless device for providing a combined distributed application directory listing;

assigning a priority for the requested application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;

examining at least one control parameter from the group comprising application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with a matching application program for the requested prioritized application for controlling access to the requested prioritized application.

25. (Original) The method of claim 24, wherein said at least one control parameter dictates a behavior of the matching application.

26. (Previously Presented) The method of claim 25, wherein the behavior includes allowing communication with the selected prioritized application, refusing communication with the selected prioritized application, downloading the selected prioritized application, or distributing the selected prioritized application.

27. (Previously Presented) The method of claim 25, further comprising:
 launching the matching application; and
 receiving a service request to connect the selected prioritized application and the matching application.

28. (Previously Presented) The method of claim 27, wherein when a user closes the matching application, the method further comprises:
 erasing the selected prioritized application, if specified by the associated control parameters.

29. (Currently Amended) A computer readable medium encoded with computer executable instructions ~~program product for controlling access to an application program in a wireless device~~, comprising:

a computer readable medium storing:
 program code for receiving a service request from a nearby wireless device over a wireless ad-hoc communications network to connect to an application;
 program code for exchanging distributed application directory information with the nearby wireless device for providing a combined distributed application directory listing;
 program code for assigning a priority for the requested application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;
 program code for examining at least one control parameter from the group

comprising application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with a matching application program for the requested prioritized application.

30. (Currently Amended) The computer readable medium ~~program-product~~ of claim 29, the computer readable medium further storing:
 program code for launching the matching application; and
 program code for receiving a service request to connect the selected prioritized application and the matching application.

31. (Currently Amended) The computer program readable medium ~~program-product~~ of claim 30, the computer readable medium further storing:
 program code for erasing the selected prioritized application when a user closes the matching application, if specified by the associated control parameters.

32. (Currently Amended) A system ~~for controlling access to a preferred application program in a wireless device~~, comprising:
 a memory device; and
 a processor disposed in communication with the memory device, the processor configured to:
 maintain a local information database including a distributed directory, the directory listing all applications resident in each device in an ad-hoc network in each said at least one device, the local information database associating at least one prioritized application program with at least one control parameter, said at least one application program including said at least one prioritized application program, and said at least one prioritized application program including a preferred application program;
 conduct an inquiry of the ad-hoc communications network to discover at least one

nearby device in said at least one device, the inquiry including an indication that said at least one nearby device may include a middleware layer;

exchange distributed application directory information with a nearby wireless device over the wireless ad-hoc communications network for providing a combined distributed application directory listing;

access the combined distributed application directory listing to identify the preferred application program in said at least one prioritized application program;

assign a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device; and

access the local information database to examine in the combined distributed applications directory said at least one control parameter from the group comprising application states; user-defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications associated with the preferred application program.

33. (Original) The system of claim 32, wherein said at least one control parameter associated with the preferred application program dictates a behavior of a peer device in said at least one nearby device toward the preferred application program.

34. (Original) The system of claim 33, wherein the behavior includes allowing communication with the preferred application program.

35. (Original) The system of claim 32, wherein the local information database further includes preference information relating to said at least one application program.

36. (Original) The system of claim 35, wherein the preference information includes a preference of a peer device in said at least one nearby device for one of said at least one application program.

37. (Original) The system of claim 32, wherein a user of the wireless device selects said at least one prioritized application program and defines said at least one control parameter associated with each said at least one prioritized application program.

38. (Previously Presented) The system of claim 32, wherein a program resident in the wireless device monitors actions performed by a user of the wireless device to select said at least one prioritized application program and define said at least one control parameter associated with each said at least one prioritized application program.

39. (Currently Amended) A method, comprising:

- maintaining a local information database including a distributed application directory, the directory listing all applications resident in each device in an ad-hoc network in each said at least one device, the local information database associating at least one prioritized application program with at least one control parameter, said at least one application program including said at least one prioritized application program, and said at least one prioritized application program including the preferred application program;
- conducting an inquiry of the ad-hoc communications network to discover at least one nearby device in said at least one device, the inquiry including an indication that said at least one nearby device may include a middleware layer;
- exchanging distributed application directory information with a nearby wireless device over the wireless ad-hoc communications network for providing a combined distributed application directory listing;
- accessing the combined distributed application directory listing to identify the preferred application program in said at least one prioritized application program;
- assigning a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device; and
- accessing the local information database to examine in the combined distributed applications directory said at least one control parameter from the group comprising

application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications associated with the preferred application program.

40. (Original) The method of claim 39, wherein said at least one control parameter associated with the preferred application program dictates a behavior of a peer device in said at least one nearby device toward the preferred application program.

41. (Original) The method of claim 40, wherein the behavior includes allowing communication with the preferred application program.

42. (Original) The method of claim 39, wherein the local information database further includes preference information relating to said at least one application program.

43. (Original) The method of claim 42, wherein the preference information includes a preference of a peer device in said at least one nearby device for one of said at least one application program.

44. (Original) The method of claim 39, wherein a user of the wireless device selects said at least one prioritized application program and defines said at least one control parameter associated with each said at least one prioritized application program.

45. (Original) The method of claim 39, wherein a monitor program resident in the wireless device monitors actions performed by a user of the wireless device to select said at least one prioritized application program and define said at least one control parameter associated with each said at least one prioritized application program.

46. (Currently Amended) A computer readable medium encoded with computer executable instructions ~~program product for controlling access to a preferred application~~

~~program in a wireless device~~, comprising:

a computer readable medium storing:

program code for maintaining a local information database including a distributed application directory, the directory listing all applications resident in each device in an ad-hoc network in each said at least one device, the local information database associating at least one prioritized application program with at least one control parameter, said at least one application program including said at least one prioritized application program, and said at least one prioritized application program including the preferred application program;

program code for conducting an inquiry of the ad-hoc communications network to discover at least one nearby device in said at least one device, the inquiry including an indication that said at least one nearby device may include a middleware layer;

program code for exchanging distributed application directory information with a nearby wireless device over the wireless ad-hoc communications network for providing a combined distributed application directory listing;

program code for accessing the combined distributed application directory listing to identify the preferred application program in said at least one prioritized application program;

program code for assigning a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device; and

program code for accessing the local information database to examine in the combined distributed applications directory said at least one control parameter from the group comprising application states, user-defined application settings and macros, wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications associated with the preferred application program.

47. (Currently Amended) A system ~~for controlling access to a preferred application program in a wireless device~~, comprising:

means for maintaining a local information database including a distributed applications directory, the directory listing all applications resident in each device in an ad-

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hoc network in each said at least one device, the local information database associating at least one prioritized application program with at least one control parameter, said at least one application program including said at least one prioritized application program, and said at least one prioritized application program including the preferred application program;

means for conducting an inquiry of the ad-hoc communications network to discover at least one nearby device in said at least one device, the inquiry including an indication that said at least one nearby device may include a middleware layer;

means for exchanging distributed application directory information with a nearby wireless device over the wireless ad-hoc communications network for providing a combined distributed application directory listing;

means for accessing the combined distributed application directory listing to identify the preferred application program in said at least one prioritized application program;

means for assigning a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device; and

means for accessing the local information database to examine in the combined distributed applications directory said at least one control parameter from the group comprising application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications associated with the preferred application program.

48. (Previously Presented) The method of Claim 1 wherein the selected application is a preferred application in the list of applications prioritized by the user according to preference or importance.

49. (Previously Presented) The method of claim 8 further comprising:

performing application and service discovery after the response to the inquiry wherein in response to the discovery a list of available applications program is created in the distributed applications directory for the ad-hoc network.

50. (Previously Presented) The method of claim 8 wherein the control parameters is a resultant of the examination of both the wireless device and nearby wireless device control parameters, and the selected application is controlled based on the associated parameter information..

51. (Previously Presented) The method of claim 50 wherein the control parameters are in categories including (i) application states, (ii) user-defined application settings and (iii) and macros or combinations of user-defined application settings.

52. (Previously Presented) The system of claim 32 wherein the inquiry to discover and identify the preferred application is performed by the middleware layer of the wireless device in response to detecting the middleware layer in the nearby device.

53. (Currently Amended) A wireless device, comprising:
a memory device including at least one application program, operating system software, and a distributed application directory in a middleware layer;
said distributed applications directory listing each application that is resident in each device in an ad-hoc communications network;
a processor disposed in communication with the memory device for controlling access to an application program in the device, the processor configured to:
exchange distributed application directory information with a nearby wireless device over a wireless ad-hoc communications network for providing a combined distributed application directory listing;
choose a selected application from a list of application programs in the combined distributed applications directory;
assign a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;
examine at least one control parameter from the group comprising application states; user- defined application settings and macros ,wherein the macros comprise (i) auto-

download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications in the combined distributed applications directory associated with the selected prioritized application; and

launch the selected prioritized application to enable the wireless device and the nearby wireless device to communicate via the selected prioritized application.

54. (Previously Presented) The wireless device of claim 53 further comprising:
an application program interface included in the memory for assisting the wireless device to find and communicate with a counter part application running on a nearby wireless device.

55. (Previously Presented) The wireless device of claim 53 further comprising:
a table located in the distributed application directory, the table including (i) a listing by device of applications resident in wireless devices in the ad-hoc communication network.

56. (Previously Presented) The wireless device of claim 55 further comprising:
(ii) an application identifier; (iii) a role for each application identified in the table.

57. (Previously Presented) The wireless device of claim 55 further comprising:
(iv) control parameters for each application identified in the table.

58. (Previously Presented) The wireless device of claim 57 wherein the control parameters are in categories including (i) application states, (ii) user-defined application settings and (iii) and macros or combinations of user-defined application settings.

59. (Previously Presented) The wireless device of claim 58 wherein the application states comprise (i) Installed, (ii) In-Machine, (iii) Running.

60. (Previously Presented) The wireless device of claim 58 wherein the application

settings comprise (i) Wanted, (ii) Distributable, and (iii) Erase-After-Use.

61. (Previously Presented) The wireless device of claim 58 wherein the macros comprise (i) Auto-Download, (ii) Downloadable, (iii) Auto-Launch-Everything, and (iv) Transfer and State Indications.

62. (Previously Presented) A medium storing program instructions, executable in a computer system for launching an application runnable in a wireless device and a nearby device connected to an ad-hoc communication network and enabling the wireless device to communicate with the nearby device via the application and perform the following method:

at start, determining if an application to be launched is in the wireless device;

if not, copy and install permanently or temporarily in the wireless device, the

application;

from the nearby device and return to start;

determining if the application is in the nearby wireless device;

if not, copy the application from the wireless device to the nearby wireless device,

and return to start;

determining if the application running in the nearby device;

if yes, let the wireless device and the nearby wireless device communicate via the

application until terminated and return to start;

if not, determine if the application is running in the wireless device;

if yes, return to start, and

if not, start the application in the wireless device and return to start.

63. (Currently Amended) A system ~~for controlling access to an application program in a wireless device~~, comprising:

a memory device including a distributed application directory in a middleware layer, the directory listing all applications resident in each wireless device in an ad-hoc network;

and

a processor disposed in communication with the memory device for controlling

access to an application program in the device, the processor configured to:

choose a selected application from a list of application programs in the distributed applications directory;

assign a priority for the selected application based on the combined distributed applications directory, wherein the priority is calculated from a local application priority and corresponding application priority of the nearby device;

examine at least one control parameter from the group comprising application states; user-defined application settings and macros, wherein the macros comprise (i) auto-download, (ii) downloadable, (iii) auto-launch-everything and (iv) transfer and state indications associated with the selected application; and

determine a behavior for the selected application based on the assigned priority and the at least one control parameter.